

A CASE OF SYMMETRICAL CONGENITAL
DISLOCATION OF THE HEAD OF
EACH RADIUS.

By W. H. BERGTOLD, M.D.,

OF BUFFALO.

ADJUNCT PROFESSOR OF PATHOLOGY, MEDICAL DEPARTMENT OF THE UNIVERSITY OF BUFFALO, ASSISTANT ATTENDING PHYSICIAN, BUFFALO ORPHAN ASYLUM.

DURING the writer's attendance at the Buffalo Orphan Asylum, his attention was called to the following case by a remark of the matron's that there was a colored boy in the Home who had queer hands and who "ate backwards".

An investigation elicited the following facts and statements: Willie Lewis, æt. 8, colored. His mother is dissipated and cannot be relied upon for any facts concerning the boy's previous history. Fortunately the colored midwife who assisted at the child's birth was found and from her it was ascertained that the fixed position of the hands (in pronation) was at that time noticed, and that it was also remarked that the child then seemed otherwise misshapened, though nothing more definite could be learned in regard to this latter condition. The boy, it is said, became more normal in shape in a few days, but, as his mother puts it, his arms have remained crippled ever since.

So far as can be learned there is no history of post-natal accident, nor of any similar condition in any other member of the family.

Physically the child is normal except that the hands are always pronated. If asked to accept a penny he does so with the finger tips, not with the palm up. If one insists on dropping it into his hand, he flexes the forearm completely on the

arm and carries the hand over the shoulder, its dorsum downward, showing very plainly the lack of rotation. Flexion and extension of the forearm are complete and perfect. Rotation of the forearm is entirely wanting, and what little advance that is made from pronation to supination is purely through the radio-carpal joint.



FIG. 1.—Boy trying to grasp a stick so as to place the hands in complete supination.

Examination of the elbows shows the external and internal condyles and the olecranon normally situated; immediately beneath the articular surface of the external condyle is a roundish mass which can be traced into the radius, and which

on forcibly attempting to rotate the forearm moves slightly with it. The radial head is absent from its normal position. By following the radius backward it can easily be noticed that there is a backward dislocation of its head and that the radial neck and shaft have curved themselves partly around and over the ulna, allowing the lower end of the radius to lie internal to the ulna as it normally is in full pronation. Supination is prevented by this locking of the radius about the ulna. The dislocated radial head on complete flexion of the forearm projects very much like a second olecranon. There is no coalescence of the radius and ulna.



FIG. 2.—Exhibits the right elbow with differently shaped papers over three points of interest: (1) a triangle on the external condyle; (2) a circle over the normal position of the radial head, and (3) a square over the dislocated radial head.

The condition is symmetrical, i.e. exists at each elbow.

This boy was shown to the class at the Buffalo General Hospital Clinic and was examined by Prof. Roswell Park, who agreed with the writer in the above diagnosis.

A search through the literature at hand discloses but three similar cases recorded and shows its great rarity. The first is by Dupuytren (quoted by Hamilton in "Fractures and Dislocations") and is described as follows: "The abnormal position which the head of the radius had assumed was at the back of the humerus, beyond which it extended for the space of at least an inch. This disposition of parts was absolutely identical on the two sides, and had all the characteristics of a congenital affection."

The second is one mentioned by Servier (quoted by Herskovits, *Wien. Med. Press.*, 1888, p. 217), and a third case by Herskovits personally (*ibid*).

This last case was a soldier, æt. 21, with no family history of any similar trouble. The lessened mobility at the elbow-joint first attracted attention. Examination of the joints showed them to be very markedly deformed, with the radial heads enlarged. Pronation was complete, supination only one-half.

Malgaigne, according to Herskovits, refers to five cases, but gives no particulars.

Herskovits also speaks of experimental work concerning the production of elbow dislocations. Streubel, Barros, Lübker, Königschmid, as well as Herskovits have contributed to this work, which is, however, unsatisfactory because more or less contradictory.

Herskovits deduces as hypotheses to explain these luxations: (1) External injuries to the belly of the mother (Cruveilhier) or muscular activity of the fœtus (Chaussier). (2) Disease of the capsule or the ligaments (Sedillot), hydrops or fungus (Parise, V. Ammon). (3) Disease in the central nervous system, with consecutive contractures (Guerin) or muscular paralysis (Verneuil). (4) Peculiar fixation of the limbs *in utero* (Dupuytren). (5) Defective construction of the joint (Paletta, Breschet, V. Ammon).